Introduction to FMJ05 (87) gas mask and its derivative models

The FMJ05 gas mask, also known as the Type 87 gas mask, is a filter-type gas mask with the most variants and widespread use across various industries in my country. In the 1980s, classic masks like the S10, M40, MCU-2/P, and C4 in the West, and the PMK series in the East, emerged one after another, becoming the face of the Cold War's passing. The FMJ05, released in 1987, was a contemporary product in my country.

The FMJ05 family includes several masks, including the FMJ05/MF11B, MF11, FMJ05A/MF12, FMJ06A, and FMJ07, offered by various manufacturers. The FMJ05/MF11B is the most common, basic model, with a left-side air intake and a small gas filter canister. The MF11 is equivalent to the FMJ05 with a drinking fountain, the only model in the series with this feature. The FMJ05A/MF12 relocates the air intake to the bottom, features a black bellows, and full-size gas filter canisters, replacing the older Type 59 and Type 64 masks for specialised chemical defence units. The FMJ06A is equivalent to connecting a blower in series between the FMJ05A's airway and gas filter canister. The FMJ07 is equivalent to connecting a gas cylinder to the FMJ05A's airway via a hose to prevent hypoxia in harsh environments such as high altitudes. Some articles claim that the MFT-2 rocket propellant special protection mask from the 1980s and 1990s used the MFJ05 mask, but the descriptions are conflicting, and it seems more like the MF14.

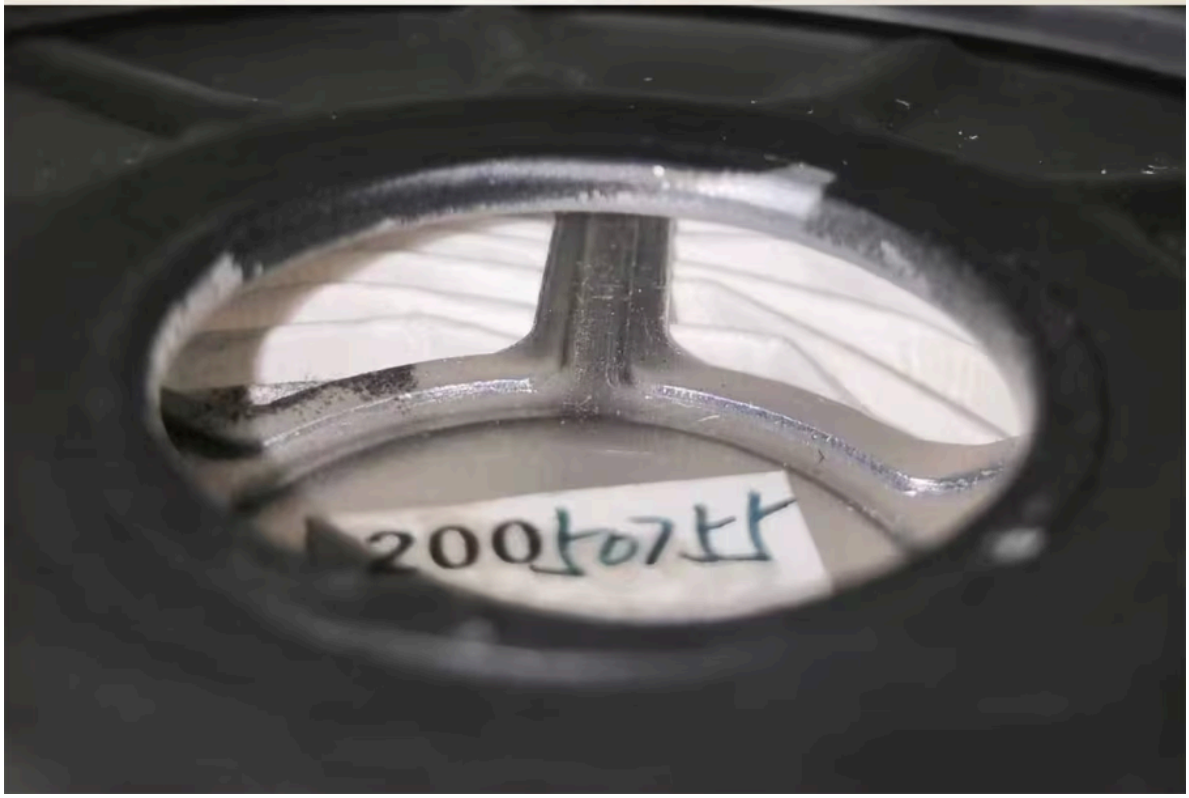
FMJ 06A 型
防毒面具

FMJ05型
防毒面具

The visor comes in three sizes: large, medium, and small, marked with 1, 2, and 3 on the underside. The FMJ05's window may have been inspired by the M17 series, and some have installed M17 attachment lenses on the FMJ05. Neither the visor nor the lenses should be exposed to organic solvents. The FMJ05 abandons the helmet-style or headband-based design. The headband is a six-point system, less prone to sideways slippage than a five-point system. The headband was originally made of fabric, but is now mostly rubber.

The inner edge of the mask has a curved edge that fits snugly against the wearer's face to prevent air leaks. A half-mask covers the mouth and nose to prevent exhaled moisture from adhering to the lenses. When inhaling, the inlet valve opens and the exhalation valve closes. Clean air is guided through the oronasal mask to flush the lenses, preventing fogging, and then enters the mask from the top. When exhaling, the inlet valve closes and the exhalation valve directly in front opens to expel air. FMJ05 and 08 use the same exhalation valve-talker combination as FMJ02 and 03. The green membrane in the center amplifies the wearer's voice through vibration. Surrounding it, from the inside out, are the primary and secondary exhalation valves. The device is secured by clamping the outer plastic cover and the inner base, so be sure to tighten the plastic cover.

The lightweight gas filter canister that comes with the FMJ05 is a ZB-P2-2 filter element. This canister features a gas filter layer and a fiberglass cigarette filter layer, with the folded cigarette filter paper visible through the air inlet. It protects against a variety of toxic gases, mists, and particulate matter, in addition to carbon monoxide, and therefore against viruses and other microorganisms. It utilizes a NATO STANAG4155 standard threaded connection. The FMJ05 and FMJ08 series masks have highly adaptable interfaces and can also accept GOST-interface canisters. The canister is pure black with no external markings, save for a production date label on the inside of the air inlet. Multiple manufacturers produce canisters with the same appearance and performance, and they also offer other canisters with similar appearances, which require careful identification. The standard FMJ05A canister is similar in appearance to the older 111 model, with a brownish hue and side markings.

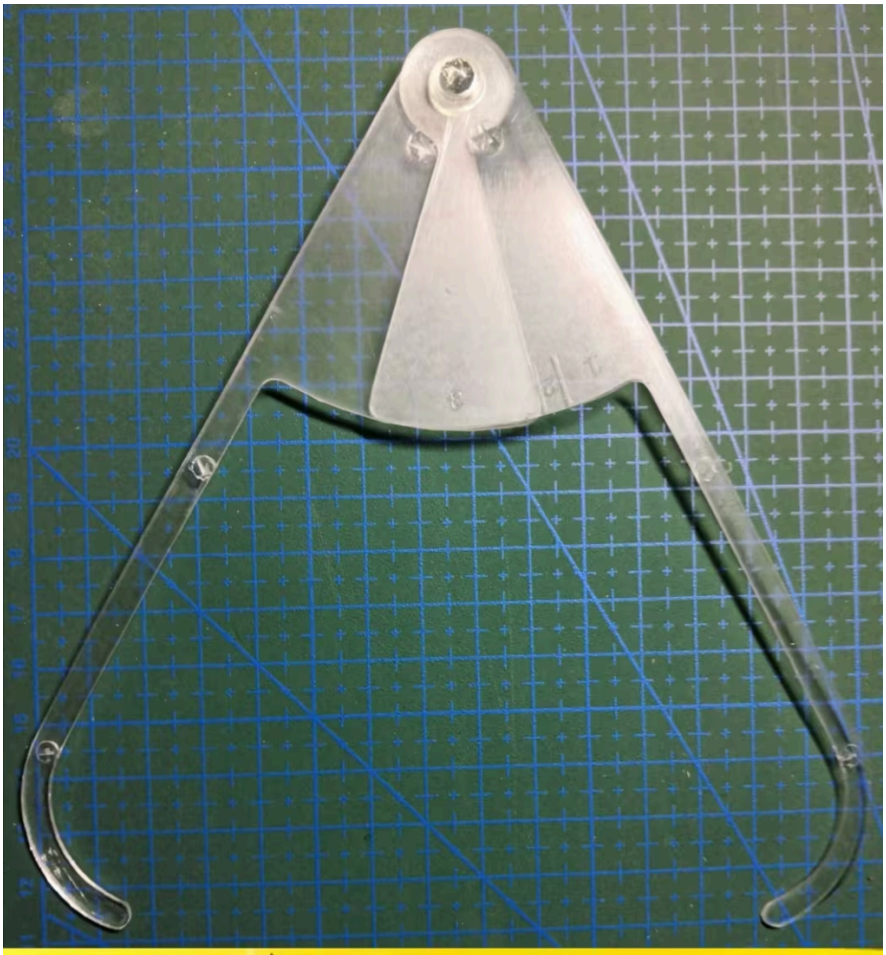


The mask bag was changed from solid-colour canvas to camouflage vinylon canvas, with the interior divided into two compartments.

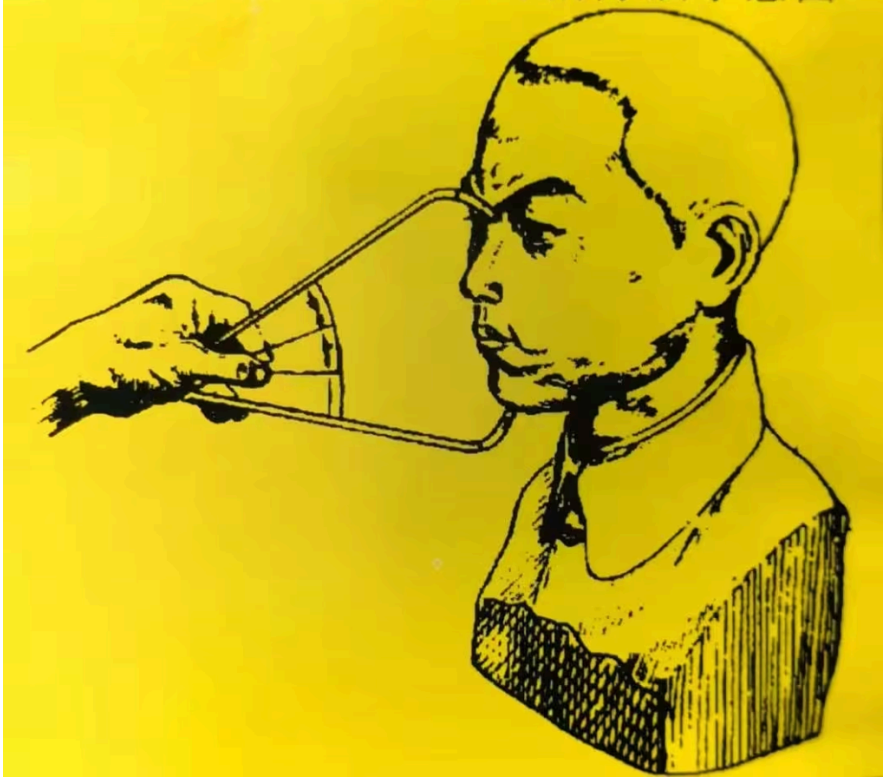
Each gas filter canister comes with a mask bracket. When storing, install the gas filter canister and then insert the bracket into the mask to prevent deformation.

Each FMJ05 comes with a resistor to simulate breathing resistance instead of the canister, but it does not provide protection.

Generally, each wooden box contains 20 boxes of FMJ05 and comes with an optional ruler. Select the mask according to the range of the measurement results. No. 2 is the most common.



用测量尺选配面罩型号的方法示意图



Chemical hood

While the FMJ08, 09, and 10 masks have been in service for years, the FMJ05 and its derivatives remain highly visible, successfully outlasting their predecessors like the S10, M40, and MCU. Various FMJ05s have appeared in the fight against SARS, in the disposal of chemical weapons left behind by the Japanese army, in Somalia escort missions, in emergency rescue operations, and even in floor advertising campaigns.

Xiaotangshan Hospital

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